Friends of Mineralogy

Colorado Chapter Newsletter

January, 1989

Notes From the President:

As the incoming president of the Colorado Chapter of Friends of Mineralogy, I am both honored and privileged to work with the membership in continuing the goals set forth by the organization. These include not only the preservation of mineral localities and promoting an appreciation and knowledge of mineralogy and geology, but perhaps most importantly the bringing together of amateurs and professionals to achieve these goals.

Another important goal of the Friends of Mineralogy is to continue to attract new membership, as well as to maintain the continued support of current members; to this end, I intend to attempt to expand the scope of the newsletter to include not only meeting announcements, but other assorted "feature" articles of mineral localities and other topics related to the diverse realm of geology and mineralogy. I am therefore urgently soliciting any ideas, and preferably contributions, for this newsletter. The success (or failure) of this venture is in many ways directly related to the interest and commitment of the membership in insuring a continuing flow of newsletter articles. I know of many of you who collect minerals in the field, have assimilated excellent collections, or are making progress on studies of a mineralogical nature - such endeavors can and should be included in this newsletter in an effort to provide a contemporary aspect that is a reflection of the member interests. As part of the effort to provide and solicit short notes for the newsletter, the following abstract on an interesting mineral locality near Denver, and a more extended article reprinted (in two parts) from the Geoliterary Society Bulletin are included. Other types of information are also solicited, such as new mineral finds, guest editorials, "personality sketches", and other news items of interest to the membership.

The meeting schedule for this coming year is listed below. I encourage you to attend these meetings; they provide not only a setting for a social gathering that facilitates an exchange of ideas and information between a diverse group of talented individuals, but hopefully an interesting series of programs as well.

The officers for this next year are listed above: the intent is to inform the reader as to who is on the Board of Directors, with the tacit reminder to let any of us know what your ideas, complaints or comments are regarding the conduct of this Chapter's business.

I thank Pete Modreski, D.S. Collins, and Keith Williams for providing material for this newsletter, and Dianne Kile for assistance in preparing it.

DUES ARE DUE

Your $10.00 annual dues for 1990 (a mere pittance) include not only membership in National FM, but will also insure your continued receipt of this sexy newsletter! Send your $$ to:

Jim Hurlbut
c/o Geology Department
Denver Museum of Natural History
City Park
Denver, Colorado 80205

Friends of Mineralogy 1990 Meeting Dates

Meetings, unless otherwise noted, will be held in the west (Ricketson) auditorium at the Denver Museum of Natural History, and will start at 7:30 p.m. on the second Thursday of alternate months (the September meeting will be held on the first Thursday because of the Denver Gem and Mineral Show). Board meetings are generally held on the preceding Monday; members are welcome.

January 11
March 8
May 10
September 6
November 8

January Program: "Specimen Recovery from Clear Creek Cave"

This program, presented by Ginny Mast and Dan Kile, will document the recovery of speleothems from Clear Creek Cave in June of 1989. The specimens recovered will be used for a cave exhibit/reconstruction at the Colorado School of Mines Museum.

Current Notes, Reports, and Other Rumors

A grand prize drawing conducted by the National Mining Hall of Fame and Museum for the Robert E. Lee mine in Leadville (as part of a membership drive) was won by a well known mineral dealer: Mark and Jeanette Rogers of Yucaipa, California (the deed for the mine had been presented to the National Mining Hall of Fame by the Boettcher Foundation of Denver). The Robert E. Lee mine, located on Fryer Hill, was one of the most productive in Leadville's history, having produced, over a 17 hour period, 95 tons of ore valued at $118,000; the richest ore assayed as high as 11,000 ounces per ton. Production of this mine through 1882 was $18,000,000 by 1988 prices. Congratulations to Mark for his extraordinary good fortune (I wonder what the County taxes are....).

- - abstracted from "The High-Grade", November, 1989

"Those pretty crystals you collect may flood your home with radon". Scientists in Switzerland measured the radon levels in homes whose owners displayed minerals, and found levels about 50% higher than background. Radon-220 from thorium - bearing minerals was not detected outside of the display cases, presumably because of the very short half life, but radon-222, a decay product of uranium - bearing rocks with a half life of nearly 4 days is a likely a source of increased radon levels. People with such collections are advised to seal their exhibit cases and provide a vent to the outside to prevent radon accumulations indoors.

- - abstracted from Science News, V. 136, 1989

From a note recently received; prepared for the Northwest Mining Association:
On June 6, 1989, Senator Dale Bumpers of Arkansas introduced S. 1126, referred to as the "Mining Law of 1989." The following comments summarize the content:

1. Lands open to location are further restricted.
2. Prospecting will require notification to the surface managing agent prior to initiation of such activity.
3. The bill requires a $100 recordation fee per claim.
4. An annual holding fee of $100.00 per claim shall be required to perform $50.00 per acre (i.e. - a typical 20 acre claim = $1,000) of annual labor, which will be required for the first five years, followed by $100.00 per acre for the next five years; after 10 years the claims must either be patented (nearly impossible - ed.) or abandoned.
5. Owners of existing mining claims will be required to, within three years, either relocate the claims under the new laws described above, or after three years provide either $5,000 in annual assessment or a payment of the same amount each year...

I don't personally know what the disposition has been regarding this bill, but the fact that it was presented at all is indicative of a continuing debate concerning revising the 1873 mining laws. I certainly am not in favor of "land grabs" by individuals who have no intention of fulfilling the intent of the original (1873) mining law, and who are primarily interested in excluding any collecting on otherwise public property, but this current proposition seems a bit extreme.

It is my understanding that a second edition of the Encyclopedia of Minerals will soon be available (December, 1989?); this volume evidently will contain 400 new entries (4,000 total) and a substantial proportion of macro-specimen photographs (those in the first edition were mostly photomicrographs), and will cost ~$100.00 (ulp!)

Specimen-quality amethyst from Maine continues to be produced from near the town of Sweden; the Plumbago Mining Corporation has reported about 5,000 pounds production this past summer (!), with crystals measuring to 4" x 6". The largest cut stones to date are ~12 ct. Crystals are removed by hand after the overburden (about 6 feet) is removed with a backhoe; the amethyst occurs in a quartz seam in schist, which is evidently at least 40 ft. long and 10 - 12 ft. deep.

All of the amethyst is currently being marketed by the Plumbago Mining Corp., Rumford, Maine. It is reported that Plumbago Mining will reopen the famous Mt. Mica tourmaline mine in 1990.

- - abstracted from Gems & Gemology, Fall, 1989

For those of you who expect a post-Tucson depression: the Bangkok International Jewelry Fair will be held March 12-14, 1990; for information contact Headway Trade Fairs Ltd., 9/F Sing-Ho Finance Building, 168 Gloucester Road, Hong Kong.

Minerals of Colorado update: Work continues on revising and finalizing the mineral descriptions in the Minerals of Colorado manuscript. According to a summary prepared by Bob Cobban in November, about 46% of the (757 total!) mineral entries are in "third draft" (which is a more or less 'final' state), 14% are in "second draft" form, and 40% are still in "first draft" form. Each of the authors is working on finalizing certain assigned mineral headings, and the goal for work during 1990 is to convert half of the remaining entries into "final draft" copy. In addition, photographs and maps for the book still need to be selected and/or prepared. A semi-final draft of a bibliography for the book was completed and published in 1989 as U.S. Geological Survey Open-File Report 89-206. The 124-page bibliography can be purchased from the U.S.G.S. for $18.75 (paper copy), $4.00 (microfiche), or for $12.00 (on two 360K 5-1/4" floppy disks, report no. 89-206B), $6.00 (one 5-1/4" 1.2 M disk, no. 89-206C), or $10.00 (one 3-1/2" 0.72 or 1.44 M disk, no. 89-206D). The computer disks are in IBM-compatible WORDSTAR format. The report can be ordered from:

U.S. Geological Survey
Books and Open-File Reports
Box 25422
Federal Center
Denver, Colorado 80225

Report on symposium book (abstract) sales: As of December, we have 41 copies of the 1988 Precious Metal Symposium volume (left out of a total of 300), and just 9 copies of the 1986 Colorado Pegmatite Symposium volume (out of the last, perhaps final, 50 printed). Both are still available for $15, as is the Photography Symposium volume.

We'd like to thank chapter members (and a few other volunteers) who helped staff the FM mineral identification booth at the Denver Show this year: Sam Rosenblum (a new chapter member this year), Lee Pruitt and Bob Zartman (both "crossover volunteers from the Littleton Club), Howard Bachman, Don Belsher, Jim Hurlbut, Bill Smith, Bill Warren, and Dave Weller (our apologies if we missed anyone). Working at this booth always provides some stimulating and entertaining experiences, and it's very popular with people at the show.

Collectors of fluorescent minerals will be interested in The Henkel Glossary of Fluorescent Minerals (special 1988-89 issue of the Journal of the Fluorescent Mineral Society), published in September, 1989. This 91-page, ring-bound book, similar in size and format to the Glossary of Mineral Species, contains an alphabetical listing of all minerals (some 566, plus assorted entries for rocks and mineraloid organic substances) known to be fluorescent. It includes the chemical formula of each mineral, plus information about reported colors of fluorescence under short and long wave ultraviolet light. The book represents a compilation prepared by Dr. Gerhard Henkel, of Baden-Baden, West Germany, and edited for publication by Earl Verbeek and Peter J. Modreski. It is available for $14.50 postpaid from the Fluorescent Mineral society, P.O. Box 2694, Sepulveda, California, 91343; it may also be purchased for $12.50 when available from members of the Fluorescent Mineral Society (Pete Modreski will have copies available at the January FMCC meeting). Pete Modreski is planning to give a two-part, in-depth FMCC program

about "mineraloid organic substances" at some as yet undetermined date.

Update on local dinosaur activities: For those degenerates who care somewhat about paleontology and general earth science, a few words of news about the dinosaur track and bone sites near Morrison. The local non-profit group, Friends of Dinosaur Ridge, is proceeding with plans to establish trails and interpretive signs at the geological and fossil sites on the Dakota Hogback along Alameda Parkway. As a step in turning this area into a permanent natural history park, a public hearing regarding the proposed permanent closure of Alameda Parkway where it crosses the hogback is being held by the State Highway Department on Wednesday evening, January 24, at Red Rocks Elementary School in Morrison. Closing the road will make it possible to develop the fossil sites along the narrow roadside for visitor access. Also, an evening lecture about the dinosaur track sites is going to be presented at the Colorado School of Mines on Monday, January 22. Dr. Martin Lockley of the University of Colorado will give a program titled "The Dinosaur Tracks of Morrison, Colorado". The lecture will be at 7:00 p.m. in Metals Hall at the Green Center on the Colorado School of Mines campus; there is no charge and the public is invited. The program by Dr. Lockley will be repeated (again open to the general public) at 11:00 a.m. on Monday, February 26, in the building 25 lecture hall on the Federal Center in Lakewood. Pete Modreski can provide further information about these meetings or about the activities of Friends of Dinosaur Ridge.

News of Members

We note with sadness that Thelma Hurianek, wife of Jerry Hurianek, passed away on December 6, 1989. Thelma was an avid mineral collector in the Crystal Peak area, and participated in the recovery of the specimens used for the reconstruction of the amazonite and smoky quartz pocket on display at the Denver Museum of Natural History. Thelma will be missed by all who knew her.

Two new members are welcomed to FMCC:
Gene Tribbey - a resident of Galesburg, Illinois who spends his summers in Ouray, and
Robert Barrell, of Boulder, Colorado

The following biography on Ed Eckel was received from Rick Collins; as most of you know, Ed passed away September 28, 1989. This biography is a tribute to his monumental contributions to the U.S. Geological Survey, Friends of Mineralogy, and the Scientific Community as a whole.

Edwin B. Eckel - 1906 - 1989

Ed was born in Washington, D.C. on January 27, 1906, to a mother who loved literature and a father who was a geologist. He earned a BS degree in chemistry from Lafayette College at Easton, Pennsylvania, and a Master's degree in geology from the University of Arizona. He later continued additional graduate work at the Colorado School of Mines in Golden, Colorado. Soon after graduation from the University of Arizona, Ed went to work for the Mineral Resources Branch of the U.S. Geological Survey in 1930. Near the end of World War II, Ed was sent overseas to investigate both metallic and nonmetallic mines within allied-occupied Axis territory. After the war he founded the Engineering Branch of the USGS, a branch which he believed was

necessary and that he loved. During management of this branch, Ed began work on a favorite hobby - - compiling and writing USGS Bulletin 1114, Minerals of Colorado - A 100-Year Record. In 1958, he became Branch Chief for the Special Projects Branch, a job he held until his retirement from the USGS in 1968. But, because of his love for geology, Ed could not stay retired and on February, 1968 became Editor for the Geological Society of America and soon after became Executive Secretary for that organization. In 1974 he retired from this position and in 1975, he returned to the USGS to coordinate the Indian Lands Mineral project between different government agencies and to edit all reports generated by that project. In 1983, Ed retired a second time from the Survey. During those years with the USGS and GSA, Ed also served on many local, national, and international boards and committees.

During his career with the USGS, Ed published a number of reports. Among his favorites were "The Brown Iron Ores of Eastern Texas" (USGS Bulletin 902); "Geology and Ore Deposits of the La Plata District, Colorado" (USGS Professional Paper 219 - a paper that is used extensively by several Universities for their geologic summer field camps); "Minerals of Colorado - - A 100-Year Record" (USGS Bulletin 1114); "Suggestions to Authors of Reports of the USGS, 6th edition", published by the U.S. Government Printing Office, Washington, DC; and his particular pride, "The Geological Society of America - Life and History of a Learned Society", published as G.S.A. Memoir 155 in 1982.

As a person Ed was shy, quiet, slow to anger, honest, modest, and always willing to listen and to give advice when asked. As branch chief and editor, he would agonize over how to present a positive criticism of another's work without hurting that person's feelings. One gift Ed possessed was the ability to "size up" an individual and be able to predict that individual's success on a given project - a valuable gift for any supervisor.

Among the honors bestowed on Ed during his career were the Interior Department Distinguished Service Award, the Certificate of Honor from the Colorado Engineering Council, and the Geological Society of America's E. Blair Burwell Award. These he cherished, but he was just as proud of his university track medals which totaled over a dozen.

Although this memorial is only a brief description of Ed and his accomplishments, those of us who had the honor to know him will miss him and always remember his warm and wonderful personality.

- - D.S. Collins

We are told that Ed had requested that he be remembered by gifts to the Colorado Scientific Society (Ed was a past president of the CSS, in 1950 and 1951). Anyone wishing to make a tax-deductible contribution in memory of Ed Eckel should make a check out to the Colorado Scientific Society (with notation that it is for the Ed Eckel memorial fund), Box 150495, Denver, Colorado, 80225-0495. As of December 1, 1989, the CSS reports that they have received contributions in memory of Ed totaling $5,000; if a total of $10,000 is received during the next three years, the society will establish a separate, permanent memorial fund in his name. Income from the interest on the society's memorial funds is used to provide research grants to graduate students in the earth sciences.

The Colorado Scientific Society is an association of geologically-oriented scientists in the Denver area. It meets once a month, at 7:00 p.m. on the third Tuesday, at the Holiday Inn, 14707 West Colfax Ave. The next (January) meeting will be a special meeting which departs from this schedule: the 29th Annual S.F. Emmons Lecture, delivered by Dr. Laurence A. Soderblom, on "Geologic Features of Saturn, Uranus, and Neptune and their Satellites" at 8:00 p.m., Tuesday, January 16, at Metals Hall in the Green Center, Colorado School of Mines.

PUBLICATIONS BY THE U.S. GEOLOGICAL SURVEY: COLORADO AND VICINITY

(Part I of II)

reprinted from the Geoliterary Society Bulletin
volume 4, no. 1

Dianne & Dan Kile
333 Salem St.
Aurora, Colorado 80011

Literature published by the U.S. Geological Survey pertaining to areas within the state of Colorado is familiar to collectors of older geologic literature and to those who are directly involved in the mining industry. The Geological Survey has distributed an enormous body of information as annual reports, monographs, geologic folios, mineral resources, professional papers, bulletins, and water supply papers. Some of the more familiar Colorado publications include S.F. Emmon's monograph on the Leadville mining industry (1886), Bastin and Hill's professional paper on the economic geology of Gilpin County and vicinity (1917), Spurr and Garrey's professional paper on the Georgetown Quadrangle (1911), and Ransome's works on the Cripple Creek district (1906), the Breckenridge district (1911), and the Silverton mining area (1901). A comprehensive historical record of the important Colorado mining districts is given in C.W. Henderson's Professional Paper 138 (1926), titled "Mining in Colorado," which provides a timeless record of Colorado's mining industry and economic geology. Although these well-known publications constitute important records that document the geology and mining history in Colorado, there is nevertheless a wealth of additional information contained in some of the lesser-known Survey publications, including annual reports and mineral resources.

Annual reports recorded the financial activities and scientific endeavors of the Geological Survey, and were published in comprehensive volumes each year for over twenty years. The First Annual Report, printed in 1880, documents the first year of the Survey's existence; the Geological Survey was organized in 1879 by consolidating the independent government agencies headed by G.M. Wheeler, J.W. Powell, F.V. Hayden and C. King. Included in this first volume are the appointments of the Survey's first regional geologists made by Clarence King (who was the first Director), along with an outline of their respective assignments. S.F. Emmon's assignment (as the "Geologist-in-Charge" of the Rocky Mountain Division) to document the mining industry in Leadville is recorded; he authored many comprehensive studies during his tenure with the Survey, and his works are regarded as cornerstones of Colorado geology. C.E. Dutton's assignment to prepare a comprehensive geological treatise on the Grand Canyon is also included; this work culminated in the well-known Grand Canyon monograph (1882). The authority given Eliot Lord to complete a monograph on the history of the Comstock Lode in Nevada is documented in this first annual report. Lord's monograph was originally intended to be the first of a series of historical documents covering the important mining districts of the western United States, with depth and accuracy few private historians could have equaled. Unfortunately, this series was abandoned following a bitter congressional inquiry into the early activities of the Geological Survey; a congressman from Alabama, who seemed to have a personal score to settle (since Comstock silver played an important role in financing the Union war against the South), succeeded in bringing a halt to such endeavors. Other details brought out in the First Annual Report document the names, positions, and salaries of the first employees of the Survey, and other fiscal accounting including the first years cost of horses, mules, and forage. A detailed folding map

shows the general topography of the United States, as well as the boundaries of the Divisions of the Geological Survey as organized in 1879. Although the First Annual Report is seldom appreciated for its content, it nevertheless remains an important historical document.

The Second Annual Report (1882) includes Emmon's preliminary account of the Leadville mining industry, Becker's initial work on the geology of the Comstock Lode, and Dutton's preliminary report on the geology of the Grand Canyon, which contains numerous detailed line-drawings depicting the area's topography. These plates are particularly worth preserving considering the fact that the Grand Canyon Atlas (accompanying Monograph 2) can be nearly impossible to obtain.

Succeeding annual reports document other important and interesting subjects related to Colorado. For example, the Eighth Annual Report (1889) contains a chapter, written by S.H. Scudder, on the fossil butterflies of Florissant. This paper includes many detailed line-drawings of the insects found in the Tertiary volcanic deposits that are now a part of the Florissant National Monument. The Sixteenth Annual Report (1896) includes a chapter on the geology and mining industry of the Cripple Creek district, written by W. Cross and R. Penrose, documenting the earliest periods of development of this famous gold-producing area. A comprehensive map, locating mining claims in the district (depicting the myriads of overlapping and conflicting claims that provided lawyers with a comfortable livelihood through perpetual litigation) is included in this chapter, as are numerous photographs of the town and surrounding area. This report was written at an early period of development when the mine workings were relatively shallow; it was succeeded by a comprehensive treatise on the geology and gold deposits of the Cripple Creek district that was written by W. Lindgren and F.L. Ransome (Professional Paper 54, 1906). The reports on the mining industry of Telluride (Eighteenth Annual Report, by C.W. Purington) and on the geology of the Rico Mountains (Twenty-First Annual Report, by W. Cross and A.C. Spencer) contain numerous panoramic photographs of the mountainous terrain surrounding these famous mining districts.

The Twenty-Second Annual Report (1901) includes a chapter on the ore deposits of the Rico Mountains, written by F.L. Ransome. A number of underground photographs are included; these were seldom taken during the early development of many of the mining districts because of the cumbersome equipment used near the turn of the century. One such photograph illustrates the hazards associated with underground mining, showing stout mine timbers that were broken like matchsticks by the shifting ground. Another photograph shows a miner's candlestick holder, used for scale in a picture of a geologic formation. A detailed claim map of the district is also found in this report. In addition, the Twenty-Second Annual Report contains a chapter (by W.H. Weed) on the Elkhorn mining district in Montana. This report is noteworthy not only because of the comprehensive text describing the geology and mines in the area, but also because of numerous photographs of the underground mine workings, in addition to geologic and topographic maps (printed in color), and photographs of historical interest. Particularly unique are two full-page plates showing mineral specimens from the area mines; one depicts numerous crystallized native silver specimens, and the other shows a fine cerussite specimen.

Many of these preliminary accounts (such as the chapters on Cripple Creek, the Grand Canyon, and Leadville) were superseded by a monograph or professional paper; however the annual reports document much the same information, and are sometimes more easily found in bookstores handling out-of-print literature. Most accounts were never reprinted or updated, including the work on the Rico mining district, the Telluride mining district, and the fossil butterflies of Florissant. Thus, some of the early annual reports provide an important source of geologic information that is otherwise unavailable. Annual reports are becoming increasingly difficult to obtain in an intact condition, as many are disassembled and rebound as separate

chapters, with only those sections of a geologic nature being salvaged. Added to this is the fact that a very limited number were printed in the first place; 1,900 copies were distributed to libraries and congressional officials, and 3,000 copies were printed for general distribution.

Monographs were published from 1882 to 1929, and are the earliest comprehensive geologic studies produced by the Geological Survey. Many of these monographs served as foundations for subsequent studies, and remain important historical documents. One such work is titled "Dinocerata - A Monograph of an Extinct Order of Gigantic Mammals" by O.C. Marsh (1886). Marsh was instrumental in the recovery of numerous museum specimens, and conducted extensive field operations near Canon City and Morrison in Colorado, and Como Bluff in Wyoming (an excellent historical and scientific account of the latter locality is provided in "Marsh's Dinosaurs: the Collections from Como Bluff," by Ostrom and McIntosh, 1966).

Another important study published as a Geological Survey monograph was Emmon's work on the Leadville district (1886). This monograph includes numerous detailed line drawings of mining and assay equipment used in Leadville in the late 1800's, including crushers, blowers, assay and smelter implements, a specific gravity spring balance, and details of smelting furnaces and charcoal kilns. A two page photograph showing a panorama of Leadville in the 1880's, with the Mosquito Range and area mines in the background is included as Plate II. The accompanying atlas to this monograph contains, in addition to numerous color geologic maps, a topographic map of central Colorado that retains the original place names of some long-forgotten landmarks, such as Topaz Butte (now called Crystal Peak) and Platte Mountain (now called Devil's Head), as well as numerous towns and hamlets that no longer exist. A shaded relief map of the Mosquito Range, (including Leadville) is also contained in the atlas. Emmon's monograph on the Denver Basin (1896) provided an account of the local geology that has been a cornerstone for all subsequent work on the area. Another important Geological Survey monograph published during this time was the "Geology of the Aspen District" (with accompanying atlas), written by J.E. Spurr (1898); this area is now a part of a well-known ski and recreational area in Colorado.

Eliot Lord's monograph on "Comstock Mining and Miners" (1883) includes insights into the miners, mining hazards, and constant water supply problems; claim-jumping, swindles and scandals (that resulted in endless lawsuits) are recounted in this book. The thoroughness of Lord's detailed and colorful account is illustrated by some of the chapter titles: "The Discovery of the Comstock Lode"; "The Mining Camp"; "Interminable Litigation"; "The Contest with Water"; "The Great Bonanza"; "Feats of Labor"; "The Laborers of Washoe"; and "Pains and Perils of Mining". Included are several interesting tables, such as one documenting the coroner's record in 1880, and another recording the criminal cases in Virginia City. This work represents as complete and readable a history on a major mining district as has ever been done anywhere. Fortunately, this monograph has been reprinted by Howell-North Books (San Diego, 1980). The corresponding geologic monograph for this district was written by G.F. Becker (1882). An atlas accompanies this monograph, which contains topographic maps and numerous color plates representing the underground mine workings, in addition to a superb claim map showing the location of all the conflicting boundaries that led to the "interminable litigation" referred to by Lord. In addition to providing a comprehensive summary of the economic geology of the Comstock, this book richly illustrates, with unusually detailed line drawings, the surrounding terrain, and includes several pages of unique plates showing thin sections of ore minerals.

Although some of these documents were superseded by later works (published as professional papers), the original monographs are often more complete, and more colorfully written. Large atlases that accompany some of the monographs provide impressive geologic and topographic maps (printed in color) with detail and quality seldom equaled in more recent literature. Unfortunately, many of these have also been dismantled (particularly the Grand Canyon Atlas),

with the individual plates being sold as wall decorations; it is nearly impossible to obtain a complete atlas for some of the monographs, and in many cases the increasing rarity has driven the price beyond the reach of some collectors.

{to be continued ...}

From Colorado: What's New in Minerals

The following column, submitted by Keith Williams, is intended to help keep the members of Colorado FM informed of recent activity in local mines and mineral localities; specific information can be provided by Keith at (303) 567-4647.

San Juan Region: The East Camp Bird mine continues to produce scheelites on coarsely - crystallized fluorite. Recent activity has generated some 100 to 125 good quality specimens. Individual scheelite crystals have been observed measuring up to 1 inch! Late this fall, some superb selenite crystals were collected from an isolated pocket near the King stope in the East Camp Bird mine. Individual crystals up to 4 inches and totally gemmy were collected. The zone was fairly small, generating only about 40 pieces, many of which were damaged due to nearby blasting. The selenite was formed on earlier-crystallized calcite, which fluoresces a rich pink. A small zone on the 4-1/2 level yielded some very fine manganocalcite specimens. Although the crystals are only 1/2 inch, the color is good and groups up to 4 inches across have been observed. They also fluoresce a rich pink color.

Central City District: Local miners have gained access to several old mines and have leases on those properties. Included are the Hayseed mine, the Tucker mine, and the Cliff mine; all are located in Chase Gulch near Blackhawk. Additionally, the LaCross Tunnel on Quartz Hill has been leased. All of these are currently being worked for mineral specimens. Excellent hopper-growth galena crystals up to one inch have been observed, and fine groups of sphalerite on quartz have been collected. The potential for additional sulfide specimens is good. Anyone interested in viewing specimens from these mines can contact either Keith Williams (303-567-4647) or Mr. Kory MacFarlane in Central City (303-582-3415).

- - Keith Williams

Mineralogy of a Calcium - Silicate Body near Genesee Park, Colorado

Dan Kile and Pete Modreski

Often overlooked by collectors because of its accessibility, this site represents an interesting place near Denver from which a unique suite of minerals can be obtained. It is a calcium - silicate lens within Precambrian gneisses and schists formerly known as the Idaho Springs Formation. The locality is located at a roadcut on State Highway 40, approximately 1 mile south of the Genesee exit on Interstate 70; the specimens are neither spectacular nor easy to collect, but very nice thumbnail minerals of some rather uncommon species can be obtained with a fair amount of exertion (and discretion, since the site is along a major roadway, and restroom facilities are nonexistent). A partial listing of the species found at this locality has been reported earlier (Pearl & Baldwin), but much of this information has been updated (by Pete Modreski) by a more careful study of the mineral composition. A description of the minerals occurring at this locality follows.

Grossular-Andradite: an iron-rich grossular, composition intermediate between grossular and andradite. Dodecahedrons, sometimes modified by trapezohedral faces on the edges; commonly red-brown to orange, sometimes translucent. Crystals noted by Pearl to exceed 12 inches, but most commonly they are less than one inch; larger crystals are incomplete. The best specimens are thumbnail sizes. This is one of the most common species noted here.

Sphene (titanite): thin triclinic crystals with alternating dark and light-colored zones . The light (cream color) areas are anatase, presumably a result of alteration of the original mineral. Crystals are relatively common and noted up to ~ 1 inch.

Hedenbergite: formerly reported as astrophyllite because of a similar appearance, this mineral is noted as golden - brown sheaves of parallel crystals. It is relatively common at this site.

Scheelite: rarely noted at this locality - the best I have seen is a nearly complete octahedron about 3/8 inch across. Most are broken during collecting because of their brittle nature and the fact that they are enclosed in quartz. Often not noted at all because of a striking resemblance to the massive quartz that encloses them. A pronounced short-wave ultraviolet fluorescence is diagnostic.

Clinozoisite-Epidote: uncommon - noted as light- to dark-green prismatic crystals; seldom terminated. Composition probably spans the range between clinozoisite and epidote.

Idocrase: nice prismatic crystals noted to ~ 3/4 inch in length; uncommon at this locality, rarely terminated. Disatinguished from clinozoisite-epidote by its lighter green color and prismatic habit.

Allanite: commonly seen as doubly-terminated crystals showing a tan exterior (presumably an alteration of the original mineral) and a dark-colored interior.

Quartz: noted as a vein-filling material.

Collecting at this site is somewhat difficult because of the overhanging schist and gneiss that is fractured and unstable, and also the fact that it is difficult to separate the minerals from the enclosing quartz. The unique species and associations can provide an interesting afternoon of collecting, but it is important to remember that this is a State of Colorado right-of-way; discretion is probably a good idea, and an attempt to collect commercial quantities of specimens may result in not only frustration but a citation from the County Sheriff.

REFERENCES:

Pearl, R.M., 1972, Colorado Gem Trails and Mineral Guide [3rd ed.]: Chicago, Illinois, Sage Books, Swallow Press, Inc., 222 p.

Baldwin, C.E., 1979, Colorado gem and mineral collecting localities: Boulder, Colorado, Johnson Publishing Company, 37 p.